

This same arrangement occurs again in the embryo of these mollusks before they issue from the egg; the otolithe, smaller than in the adult, presents, like it, very active oscillatory movements.—*Wiegmann's Archiv*, 1845, p. 217.

*Comparative Anatomy of the Vocal Organs of Birds.* By Prof. MÜLLER.

The merit of the first examination of the vocal apparatus of birds belongs to Cuvier, to whom is also due the greatest part of the facts relative to its organization. More recently, M. Nitzsch has sought to derive advantage from the examination of the inferior larynx for the classification of birds, which has always been, as is well-known, one of the most embarrassing problems of the natural methods. M. Müller has recently made a long series of observations on the vocal organ of the *Passerinae*; the results of his labours are as yet only partly known; a detailed description will soon be published in the *Mémoires de l'Académie* of Berlin. Meanwhile we shall here point out some general conclusions of this investigation, which is impatiently looked for, as is everything from the pen of the illustrious Berlin professor.

M. Müller concludes from the facts which he has observed, that the singing *Passerinae* cannot form a natural division, and, in opposition to the opinion of M. Nitzsch, he affirms that the *Picidae* cannot be separated from them. The most natural groups of the order *Passerinae* contain types which differ in the organization of their larynx, and the variabilities of that apparatus render it little suitable to serve for classification. It is the less so, as the song may be produced by apparatus of very different structure. The order *Passerinae* must probably be preserved in its most extended limits, comprising even the *Syndactyles* and the *Climbers*, and it must include, both those birds which have the most perfect vocal apparatus, and others in which it seems to be reduced to its greatest simplicity.

The two most common forms of vocal organ among birds are :— 1st, the muscular vocalizing apparatus, formed on the type of that of our European singing-birds; 2nd, the form with a single muscle, thick or thin. It is to be remarked, that the first form prevails in Europe and in Africa, and that the second is more common in America. In consequence, the forests of the old world contain more real singing-birds; those of the new world chiefly abound in birds with a loud but little-varied voice, and resound much oftener with shrieks than with songs. Beside these two widely distributed forms, there are many other more special laryngian organizations: the most complicated is that of the Parrots.

M. Müller's memoir will contain numerous facts in detail, and engravings of all the forms described.—*Proc. Berlin Academy*, June 1845.